

Product datasheet for **MC220863**

Pum2 (NM_001160222) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pum2 (NM_001160222) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Pum2
Synonyms:	5730503J23Rik; Pumm2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>MC220863 representing NM_001160222 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAATCATGATTTTCAAGCTCTTGCAATTAGAATCTCGGGGAATGGGAGAGCTTTTGCCTACCAAAAAGT
TTTGGAACTGATGATCAACAAAAGATGGACAAAAGGCATATTTCTGGGGATGATGAATGGAGAGA
GACTGCATGGGAACTTCTCATCATTCAATGTCCAGCCTATTATGGTGCAGAGAAGATCTGGACAGAGT
TTTCATGGAAACAGTGAAGTAAATGCAATCTTTCTCCACGCTCAGAAAAGTGGAGGCCTTGGTGTGAGCA
TGGTAGAATATGTATTAAGTTCTCTCCTGCTGATAAATTGGATTCTCGATTTAGGAAGGGAACCTTTGG
TACTAGAGATGCTGAAACAGATGGACCTGAGAAAAGGAGATCAAAAAGGCAAGGCTTCTCCATTTGAGGAG
GACCAAAACAGAGATCTTAAACAAGATGATGAGGACTCTAAAATAAATGGCAGAGGTTTGCCAAATGGAA
TGGATGCCGATTGCAAAGATTTTAAATCGCACTCCTGGAAGTCGCCAAGCCTCTCCAATGAAGTAGTTGA
GCGCCTTGGCCCTAGTACTAATCCCCAGAAAGGATTGGGCCCTTCTCCTAATCCGACAGCGAATAAACCA
CTTGTTGAAGAATTTTCAAACCTGAACTCAGAATCTGGATGCAATGGACCAAGTTGGTCTGGATTCTT
TACAGTTTGACTATCCTGGTAATCAGGTACCCATGGATTCTTCCAGGACTACTGTAGGCCTTTTGGACTA
CAATCCCAACAGCAGCTCTTTCAGAGGACTAGTGCACAAACAGTTTCCAGCAGTTAACTGCAGCTCAGCAG
CAGCAGTATGCATTAGCAGCAGCTCAGCAGCCACATATAGCTGGTGTATTCTCAGCAGGCCTTGGTCCAG
CTGCAATTTGTGCCAAATCCATATATTATTAGTGCTGCTCCTCCAGGGACTGACCCGTATACTGCAGCAGG
ATTGGCTGCAGCAGCAACATTAGCAGGTCCAGCAGTGGTTCACCTCAGTATTACGGTGTCCATGGGGA
GTGTATCCAGCAATTTATTTTCAGCAACAAGCTGCAGCTGCGGCAAGCAACACAGCCAACCAGCAAGCAG
CATCACAAGCTCAGCCTGGACAGCAGCAGGTTCTTCGTCTGGAGCAGGTGAGCCTTACTCCAAG
TCAGGGCCAACAAGGCAAGCAGAGTCACTTGCAGCAGCTGCAAACCAACTTTGGCTTTTGGTCAG
AGTCTTGCTGCAGGCATGCCAGGCTATCAAGTACTAGCTCCAATGCCTATTATGATCAGACTGGTGCCT
TAGTGGTTGGCCCGGAGCAAGAACTGGCCTTGGAGCTCCAGTACGATTAATGGCTCCAACACCTGTCTT
AATAAGTTCAACAGCAGCACAAGCTGCAGCAGCAGCAGCAGCAGCTGGAGGAACTGCAAATAGTCTTACA



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GGCAGCACAAATGGTCTGTTTCGGCCAATTGGCACTCAGCCACCACAGCAGCAGCAGCAGCAGCAAC
 CAAGCTAACCTGCAGTCTAATTCATTTTATGGGAGCAGCTCTTTGACTAACAGCTCCCAGAGCAGCTC
 TTTATTCTCTCATGGACCTGGCCAACCTGGAAGTGCCTCTTTGGCTTTGGAAGTGGTAGCTCTTTAGGA
 GCTGCTATAGGCTCAGCTCTCAGTGGATTTGGCTCATCAGGAGGACTGACAAACGGTAGTGGTCGGTATA
 TCTCTGCAGCACCTGGAGCAGAAGCAAAGTACCGAAGTGTTCAGCACTTCCAGTCTATTTAGTCCAG
 CAGCCAGCTCTTTCCTCCTTCTCGGCTCCGCTATAATAGATCTGACATCATGCCCTCCGGCCGAGTAGG
 TTATTGGAAGATTTAGGAACAACCGCTTCCCCAACCTCAGCTCAGAGACTTAATTGGACATATAGTGG
 AGTTTTCTCAAGACCAGCATGGTTCAGATTACAGCAAAAGCTAGAGAGAGCTACTCCAGCTGAGCG
 ACAAAATAGTATTTAATGAAATCTACAGGCAGCCTATCAATTAATGACAGATGTTTTGGAACTATGTT
 ATACAGAAGTTTTTTGAGTTTGAAGTTTGGATCAGAAATTAGCCCTGGCTACTCGTATTCGTGGTCATG
 TTCTACCATTAGCCTTGCAGATGTATGGCTGCCGTGTTATTCAAAGGCGTTAGAATCTATTTCTTCTGA
 TCAGCAGAGTGAAATGGTTAAGGAACTAGATGGCCATGTACTTAAATGTGTGAAAGATCAAAATGGAAC
 CATGTTGTACAGAAATGCATTGAATGTGTTAGCCACAGTCACTGCAGTTCATCATCGATGCTTTCAAAG
 GACAAGTATTTGTGCTTCAACCATCCTTATGGCTGCAGAGTCACTCAGCGTATCTTAGAGCAGTGCAC
 GGCAGAGCAGACCTTACCATCTTGAAGAAGTTCACCAACACACAGAACAGTTGGTACAGGATCAGTAT
 GGCAATATGTTATTCAGCATGTACTGGAACATGGTCGACCTGAAGACAAGAGCAAAATGTTTCCGAAA
 TCAGAGGAAAGGTCTTAGCCCTGAGTCAACACAATTTGCCAGCAATGTAGTAGAAAAGTGTGTTACTCA
 TGCCCTCCCGTGTGAGAGAGCTTACTGATTGATGAGGTCTGCTGTGAGAATGATGGTCCCTCACAGTGCC
 TTATACACCATGATGAAGGATCAGTATGCCAATATGTGGTTCAGAAGATGATTGATGGCTGAGCCTG
 CGCAGAGAAAAGATAATCATGCACAAGATTCGACCTCATATTACTACTCTTCGCAAAATACACATATGGGAA
 GCATATACTGGCCAAGTTGAAAAATACTATCTGAAAAACAGCCAGATCTAGGGCCAATTGGAGGACCA
 CCAAATGGGATGCTGTAA

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM_001160222
- Insert Size:** 2958 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
- Reconstitution Method:**
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
- RefSeq:** [NM_001160222.1](#), [NP_001153694.1](#)
- RefSeq Size:** 5883 bp
- RefSeq ORF:** 2958 bp

Locus ID: 80913

UniProt ID: [Q80U58](#)

Cytogenetics: 12 A1.1

Gene Summary: Sequence-specific RNA-binding protein that acts as a post-transcriptional repressor by binding the 3' UTR of mRNA targets. Binds to an RNA consensus sequence, the Pumilio Response Element (PRE), 5'-UGUANAUA-3', that is related to the Nanos Response Element (NRE). Mediates post-transcriptional repression of transcripts via different mechanisms: acts via direct recruitment of the CCR4-POP2-NOT deadenylase leading to translational inhibition and mRNA degradation. Also mediates deadenylation-independent repression by promoting accessibility of miRNAs. Acts as a post-transcriptional repressor of E2F3 mRNAs by binding to its 3' UTR and facilitating miRNA regulation. Plays a role in cytoplasmic sensing of viral infection. Represses a program of genes necessary to maintain genomic stability such as key mitotic, DNA repair and DNA replication factors. Its ability to repress those target mRNAs is regulated by the lncRNA NORAD (non-coding RNA activated by DNA damage) which, due to its high abundance and multitude of PUMILIO binding sites, is able to sequester a significant fraction of PUM1 and PUM2 in the cytoplasm. May regulate DCUN1D3 mRNA levels. May support proliferation and self-renewal of stem cells. Binds specifically to miRNA MIR199A precursor, with PUM1, regulates miRNA MIR199A expression at a posttranscriptional level (By similarity).[UniProtKB/Swiss-Prot Function]

Transcript Variant: This variant (5) differs in the 5' UTR, is missing an in-frame coding exon, and uses an alternate in-frame donor splice site in the 3' coding region compared to variant 1. This results in a shorter isoform (3) compared to isoform 1.